

## WP3 Communication and ICT Requirements

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1. Goals and outcomes
2. Partners, resources, and timetable
3. WP tasks and coming activities
4. Meeting and reporting practices

- Main goals of WP3
  - **To analyze** the critical communication and security requirements related to TSO-DSO coordination and ancillary service provision (DSO, TSO, market operators, aggregators of DER, VPP, and data operators)
  - **To design and elaborate interdependent communication architecture for grid communications** to fulfil the identified requirements
  - **To prepare ICT specifications** for simulation environments implemented in WP4
- Outcome
  - ICT requirements specification
  - ICT architecture design specification
- Duration: M01 – M12



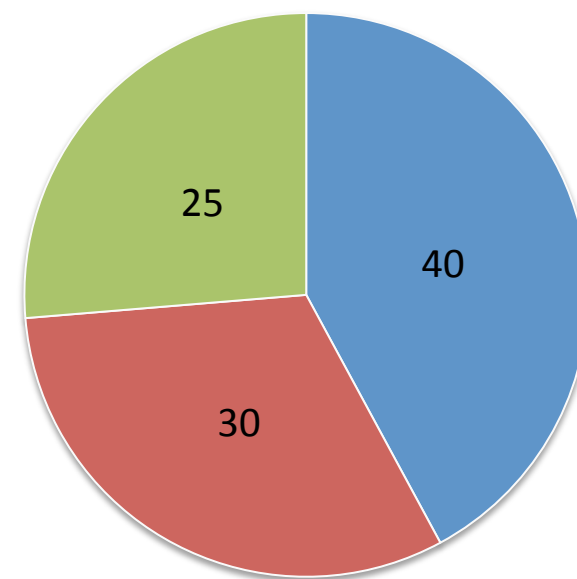
- WP3 provides output:**

- ICT specifications for WP4

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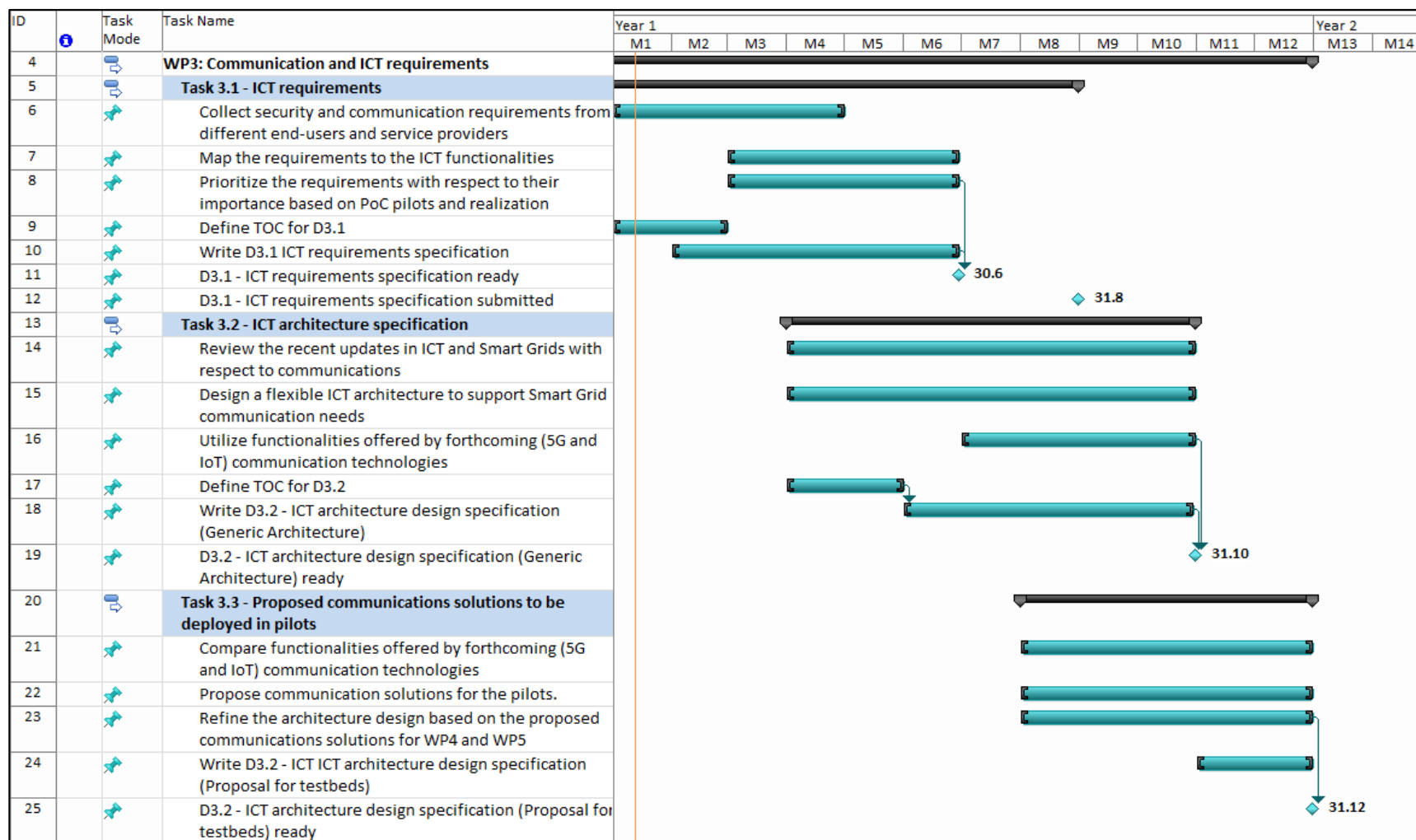
## Partners and allocated resources

	Task 3.1	Task 3.2	Task 3.3	Total
VTT	6	10	4	20
TECNALIA	10			10
EURISCO	4	2	6	12
SELTA		3	3	6
USTRATH			3	3
VITO	2	3		5
SINTEF	3		3	6
SIEMENS	3	3		6
SELNET	4			4
VODAFON	3	2	3	8
RSE	2	3		5
AIT	3	4	3	10
<b>Total</b>	<b>40</b>	<b>30</b>	<b>25</b>	<b>95</b>



■ Task 3.1 ■ Task 3.2 ■ Task 3.3

WP3 contains three tightly connected and partly overlapping tasks



## T3.1 ICT requirements

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- Duration: M01 - M06
- Task leader: TECNALIA
- Participants: VTT, EURISCO, VITO, SINTEF, RSE, AIT, VODAFONE, SELNET, SIEMENS
- Activities
  - Collect security and communication requirements from different end-users (TSO-DSO interactions and ancillary service provision)
  - Map the requirements and end-user expectations to ICT functionalities
  - Review data model standards and select suitable for ICT architecture
  - Prioritize the requirements with respect to their importance and realization possibilities
- Outcome
  - ICT requirements specification [M08]

- Define the scope and focus areas according to partners' expertise
- Find roles for each contributing partner
- Select suitable models and processes for requirement specification and architecture design work
- Start collecting requirements and discovered bottlenecks from end-users
- Start surveying suitable ICT technologies
- Sources:
  - Literature
  - Input from WP1 and WP2 (DSO, TSO, market operators, aggregators, network operators)
  - Relevant national and EU projects
  - ICT standards e.g. IEC-61850, IEC-62746
  - Simulation environment developers



- Duration: M04 - M12
- Task leader: VTT (Seppo.Horsmanheimo@vtt.fi)
- Participants: EURISCO, SELTA, VITO, RSE, AIT, VODAFONE, SIEMENS
- Activities
  - **Review the recent updates** in ICT and Smart Grid communication technologies with respect to communications highlighting possible gaps with reference to the different market schemes depicted in WP2.
  - **Design a flexible ICT architecture** to support TSO-DSO coordination and ancillary service provision.
  - **Utilize forthcoming functionalities** offered by 5G and IoT communications.
- Outcome
  - ICT architecture design specification (Generic Architecture) ready [M10] (VTT: Seppo Horsmanheimo)

- Review feasible S2S/H2H/M2M/IoT communication technologies (SoA update)
  - Work divided among partners according to their expertise
- Review recent communication and smart grid communication architecture specifications and standards (SoA update)
  - Select appropriate specifications and standards for the architecture
- Study forthcoming technologies (Beyond SoA)
  - Select potential wired and wireless technologies taking security and flexibility aspects into account.
- Start the design work towards the ICT architecture

- Duration: M08 - M12
- Task leader: EURISCO (leader: N.N)
- Participants: VTT, SELTA, USTRATH, SINTEF, AIT, VODAFONE
- Activities
  - **Compare functionalities** offered by forthcoming (5G and IoT) communication technologies
  - **Prepare ICT specifications** for selected simulation scenarios
  - **Refine the architecture design** according to initial feedback from WP4 simulations.
- Outcome
  - ICT architecture design specification (use case specific for simulations) [M12] (EURISCO: N.N)

- This task will start after summer (month 8)
- Some initial thoughts for actions (refined by task leader)
  - Prepare separate chapter to architecture design specification focusing on identified use cases TSO-DSO coordination and ancillary service provision to be implemented in WP4 (simulation platforms)
  - Find out suitable data format to present specifications, so that they do not hinder the implementation work of simulation environments or become obsolete.
  - Specifications should focusing on
    - Today's solution
    - Tomorrow's solution

- **Scope of WP3**
  - Partners' expertise and expectations
  - Modelling approaches and practices
- **Assignments**
  - Task leaders
  - Responsible persons for deliverables
- **Meeting arrangements**
  - Web conferencing : Lync, Skype, WebEx, GoToMeeting
  - WP / task meetings : every second week
  - Task leader meetings : once a week
  - Topic specific meetings : when needed
  - Progress monitoring
- **Management of working documents**
  - Google Docs, FPT server, SmartNet repository

*Thank you for your attention...*

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